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## ARTICLE XVI.

*Supplementary Observations on the Storm which was experienced throughout the United States about the 20th of December, 1836. By Elias Loomis, Professor of Mathematics and Natural Philosophy in Western Reserve College, Ohio. Read May 6, 1842.*

SINCE my article on the storm of December 20th, 1836, was communicated to the society, I have obtained two additional meteorological registers, embracing barometric observations for the same period, namely, from Fort Snelling, by Mr. J. N. Nicollet, and from Cincinnati, by Professor Joseph Ray.

*Fort Snelling, 845 Feet above the Sea. Latitude 44° 53' N.; Longitude 93° 12' W.*

1836.	Barometer.	At. Therm.	Ex. Therm.	REMARKS.
Dec. 18, 9, A. M.	29.160	60.0	+ 3.4	South wind. Clear sky.
Noon,	.155	60.0	+ 18.0	“ Cloudy.
3, P. M.	.100	58.0	+ 22.5	“ “
9, P. M.	.065	43.4	+ 18.4	Strong south wind. Cloudy.
19, 9, A. M.	28.990	60.0	+ 23.0	Calm. “
Noon,	.962	61.0	+ 25.0	South wind. “
3, P. M.	.950	63.0	+ 25.0	“ “
9 $\frac{1}{4}$ , P. M.	.875	64.0	+ 24.0	Cloudy, accompanied with sleet.
20, 9, A. M.	.850	52.0	— 5.0	N. W. wind. Snow, with sleet.
Noon.	.746	34.5	— 5.6	Strong N. W. wind. Storm begins 11 $\frac{1}{4}$ h.
3, P. M.	.740	50.0	— 5.6	“ “ “ Snow storm increases.
9, P. M.	.840	43.5	— 8.7	Very strong N. W. wind; hard snow; tempestuous; storm over at 10 o'clock.
21, 9, A. M.	29.342	58.2	— 21.6	N. W. wind, very moderate. Clear sky.
Noon,	.350	48.0	— 10.5	S. W. wind; moderate; 2 inches snow on the ground.
3, P. M.	.380	56.0	— 2.4	S. W. wind. Clear sky.
9, P. M.	.410	42.0	— 19.5	No wind. “
22, 9, A. M.	.180	52.0	— 4.4	S. E. wind. Cloudy.
Noon,	.000	49.4	+ 2.3	Strong S. E. wind. Cloudy.
3, P. M.	28.845	43.0	+ 5.4	“ “ “ “
9, P. M.	.662	52.0	+ 14.4	Calm. Snow commenced at 6, P. M.

*Cincinnati. Latitude 39° 6' N.; Longitude 84° 27' W.*

	THERMOMETER.			BAROMETER.			WIND.		RAIN.	WEATHER.			REMARKS.
	Sunrise.	2, P. M.	9, P. M.	5, A. M.	1, P. M.	9, P. M.	A. M.	P. M.		Sunrise.	2, P. M.	9, P. M.	
19	8	43	36	29.56	29.53	29.51	S. W.	S. W.		clear	hazy	variable	{ Wet day; sudden change; strong East wind. Strong wind.
20	41	43	49	.23	28.97	28.71	E.	E.	1.00	cloudy	rainy	cloudy	
21	60	11	8	.43	29.54	29.76	W.	N. W.		clear	clear	clear	
22	3	25	20	.82	.64	.47	S.	S. E.		clear	hazy	hazy	

From these observations it appears that at Fort Snelling the barometer did not begin to rise till about 3, P. M., of the 20th, although the wind had changed to north-west before 9, A. M. This is similar to what I have several times observed at Hudson. In the eastern states the barometric minimum coincided, in the present instance, almost exactly with the change of wind, and, in the absence of evidence to the contrary, I had inferred that the same rule was general. It appears, however, not to have been true; for the north-west part of the United States, and the lines of barometric minimum in this vicinity, should be represented with greater curvature than they are given on my chart. The atmospheric wave, then, in latitude 45°, travelled with nearly twice the velocity it did in latitude 30°. The entire range of the barometer at Fort Snelling was .67 inch, about half what it was in longitude 72°, on the same parallel. At the same rate, the oscillation would be reduced to about one-third of an inch in the neighbourhood of the Rocky Mountains.